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PATENT ABSTRACTS OF JAPAN

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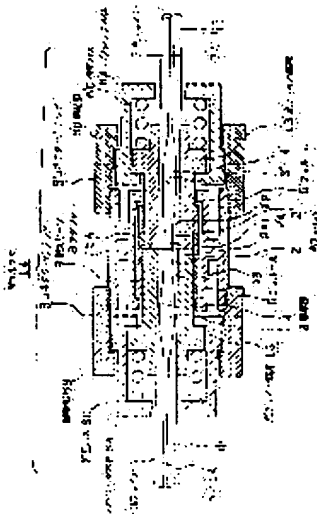
(54) OPTICAL FIBER TERMINAL OPTICAL CONNECTOR

(57)Abstract:

PURPOSE: To mutually connect optical fibers with low loss and low reflection by fusion splicing plural quartz group signal mode optical fibers having respectively different core diameters or specific refractive index differences, locally heating the vicinity of the connection part so as to diffuse a doping agent and obtaining an optical fiber terminal aligning the part other than the heat diffusion part as an aligned end face.

CONSTITUTION: In order to obtain the optical fiber terminal, the optical fibers 1, 2 having respectively different diameters

of cores 1A, 2A or specific refractive index differences are fusion-splices at first. Then, the vicinity of the fused part 3 is locally heated in a temperature range capable of suppressing the melting of the optical fibers but diffusing the doping agent contained in the cores 1A, 2A or clads 1B, 2B to form the doping agent diffusing part 4. After cutting off the optical fiber on a part separated from the diffusing part 4 on the optical fiber (2) side, a ferrule 5 is stuck and connected to the fibers 1, 2 and the fibers 1, 2 are ground together with a ferrule end face 5A as an aligned end face to obtain the optical fiber terminal 13. An optical connector 14 can be obtained by clamping the optical



fiber terminals 13, 13' provided with connector housings 6, 6' by an adaptor 8 and butting the fibers 2, 2' on the ferrule end face 5A. Thus, both the optical fibers 1, 7 can be connected.

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